VII. CLAIMS

1. A method of preserving tissue culture cells on glass slides by fixing with glutaraldehyde or methanol, followed by using a preservative agent containing a buffer, a sugar and a carbohydrate polymer, followed by using a rapid freeze step, followed by lyophilization and storage under cool and desiccated conditions.

2. A method as described in Claim 1 that results in retention of nanometer scale molecular structure detail.

3. A method as described in Claim1 that results in a product that has a shelf life greater than four years at 4°C.

4. A method as described in Claim1 that produces a preparation of cells on a glass slide.

5. A method as described in Claim1 which is suitable for Swiss 3T3 cells.

6. A method as described in Claim 1 which is suitable for HT1080 cells.

7. A method as described in Claim 1 which is suitable for HeLa cells.

8. A method as described in Claim1 which is suitable for MCF-7 cells.

9. A method as described in Claim 1 which is suitable for other cell lines.

10. A method as described in Claim 1 which is suitable for mitotic cell preparations.

11. A method as described in Claim 1 which is suitable for apoptotic cell preparations.

12. A method as described in Claim 1 which is suitable for growth factor treated cells.

13. A method as described in Claim 1 which is suitable for lysophosphatidic acid treated cells.

14. A method as described in Claim 1 which is suitable for platelet derived growth factor treated cells.

15. A method as described in Claim 1 which is suitable for tumor necrosis factor alpha treated cells.

16. A method as described in Claim 1 which is suitable for serum starved cells.

17. A method as described in Claim 1 which is suitable for probing of focal adhesion plaques.

18. A method using rhodamine fibronectin as a rapid stain for focal adhesion plaques.

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